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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/051,392	01/16/2002	Michael J. Yancey	WEYE118528/24380C	2980

28624 7590 09/09/2003

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EXAMINER

NGUYEN, CAMTU TRAN

ART UNIT	PAPER NUMBER
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3749

DATE MAILED: 09/09/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/051,392

Applicant(s)

YANCEY ET AL.

Examiner

Camtu T. Nguyen

Art Unit

3749

-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 July 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,5,-11, 13-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 6-9,11 and 13-18 is/are allowed.
- 6) ☒ Claim(s) 1,5 and 10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Response to Amendment

This Office Action is in response the Applicant's amendment filed on July 28, 2003. Claims 2-4 and 12 have been cancelled. Claims 1, 5-11, and 13-18 are pending, of which claims 1, 6, 8, 11, and 13 have been amended. Applicant's comments pertaining to the Chung and to the Marsh references are acknowledged. The claims, as amended, have been carefully considered and are further rejected based on a new ground of rejection necessitated by Applicant's amendment follow herein below for the following reasons.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Marsh (U.S. Patent No. 4,253,822) in view of Chung (U.S. Patent No. 3,440,135) and further modified in view of Jackson et al (U.S. Patent No. 5,007,181). Marsh discloses in the single figure a high turbulence dryer (2), a burner (1), and a cyclone separator (3) for drying pulp. The burner (1) receives recycled air from inlet (6) and fuel from inlet (4) terminating in a jet (5) mixes it with fresh air from inlet (7) and exhausts substantially fresh air to outlet (9) which joins a pulp inlet passage (19) before passing through an inlet aperture (20) into the dryer (2) and exits at passage (24)

Art Unit: 3749

leading to the cyclone separator (3). The cyclone separator (3) has an outlet (26) for dried pulp product and a pipe (27) for air outlet. Marsh lacks the teaching of the pulp supply including a crosslinking treatment to the pulp. Chung discloses in figures 1 and 2 a process for producing crosslinked stiffened cellulosic fibers in substantially individual fiber form including an inlet passage (19) through which wet pulp is fed into the educator (9), a component of the reaction chamber (8), conduit (26) through which primary air in form of gas or steam under pressure from the steam heater furnace by source (22) is directed into the eductor or ejector (9), and a second conduit (31) through which a secondary air from the source (27) is directed to the expansion zone (11) at a point close to the curing zone (10). The pressure at about 2.5 psi gauge created in the eductor (9) and heated air aids rapid evaporation and drying of the pulp. The pulp passing from the reaction chamber (8) is directed to a cyclone separator (34) at which air is separated from the flowing stream and exhausted at outlet (35) while the fiber product is deposited at a convenient collector (36). Chung teaches the swirling or spiral motion and the tangential entry of incoming primary air in form of gas or steam through conduit (26) and secondary air through conduit (3) to assisting and maintaining an optimum fiber suspension throughout the procedure and to increasing the heat transfer to dry the fibers, thereby aiding curing. Chung's eductor or ejector (9) lacks the configuration to circulate the pulp in a loop. Jackson et al disclose in the figure a dryer for drying wet phosphor filter cake comprising a toroidal chamber (20) having an inlet (22) for introducing the wet phosphor filter cake (38) therethrough, another inlet for introducing a flame (27) from burner (26) and a gaseous stream of air drawn from blower (28) wherein the gaseous stream circulating the phosphor in a loop and causing the dried product (38a) to draw in the collector (36). Therefore it would have been obvious to one of ordinary skill

Art Unit: 3749

in the art to include the crosslinking treatment suggested by Chung in Marsh's pulp supply source as such would provide stiffness to the pulp and to substitute Marsh's dryer for Jackson et al's toroidal chamber as such configuration would be advantageous to drying and separation as the wet fibers would recirculate along the outer edge of the loop and as such the drier fibers would move toward the inner edge of the loop.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Marsh (U.S. Patent No. 4,253,822), as modified above, and further in view of Browning (U.S. Patent No. 4,426,258). Marsh, as modified above, discloses in the single figure a high turbulence dryer (2), a burner (1), and a cyclone separator (3) for drying pulp comprising elements set forth in these claims but does not teach the pulp inlet passage (19) further includes dewatering devices as recited in claim 5. Browning discloses in Figures 2 a first dewatering press (6) and a second dewatering pres (9) prior to a drier (4) and cyclone separator (63). Therefore it would have been obvious to one skilled in the art to combine the dewatering presses (6, 9) taught by Browning to upstream of Marsh's pulp inlet passage (19) as such would further help to remove substances from pulp.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Marsh (U.S. Patent No. 4,253,822), as modified above, and further in view of Newbolt (U.S. Patent No. 5,630,691). Marsh, as modified above, discloses in the single figure a high turbulence dryer (2), a burner (1), and a cyclone separator (3) for drying pulp comprising elements set forth in these claims but does not teach the pulp inlet passage (19) further includes a feed device as recited. Newbolt discloses in Figures 1 and 2 a rotary airlock assembly (2) including a housing (4) having inlet (12) and outlet (14) ports to receive and discharge material, a rotor assembly (6)

Art Unit: 3749

rotatably mounted within the housing (4) comprises a shaft (30) and a plurality of vanes (32). Each vane (32) is constructed with an outer edge or rotor tip (34) and conforms to the interior contour of the housing (4). Therefore it would have been obvious to one of ordinary skill in the art to include a rotary airlock assembly taught by Newbolt and install it upstream of Marsh's pulp inlet passage (19) as benefits would be not only to regulate feed input into the dryer but also to separate atmospheric air from an environment of a higher or lower pressure inside the drier.

Allowable Subject Matter

Claims 6-9, 11, and 13-18 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: the art of record when considered alone or in combination neither renders or anticipates obvious a drying system for the processing of pulp into singulated and dried fibers comprising elements set forth in these claims including (a) a treatment cycle between the first dewatering and the second dewatering device wherein the cycle comprising a conduit between the dewatering devices and the conduit delivers at least a portion of the additional liquid content from the second dewatering device to the first dewatering device and (b) a fiber separation station having components as recited .

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Marsh of U.S. Patent No. 4,253,822 does not teach the dryer (2) configured to circulate the pulp in a loop.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Camtu T. Nguyen whose telephone number is 703-305-0537. The examiner can normally be reached on (M-F) 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ira S. Lazarus can be reached on 703-308-1935. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.


Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1148.

Application/Control Number: 10/051,392

Page 7

Art Unit: 3749

Camtu Nguyen
August 27, 2003



M. S. Lazarus
Supervisory Patent Examiner
Group 3700